Notice of Allowability	Application No.	Applicant(s)	
	09/769,004	DAVID SMITH	
	Examiner	Art Unit	
	Baoquoc N. To	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *06/21/2007*.

2. ☒ The allowed claim(s) is/are *1-12, 14-16, 18, 27-36 and 38*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *20070621* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/29/2007 has been entered.

Claims 1, 10 and 17-18 are amended in the amendment filed on 05/29/2007. Claims 1-38 are pending in this application.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Scott J. Gerwin, Reg. No. 57,866 on 06/21/2007.

1. (Currently Amended) A method of operating a computer system to validate ~~the~~ data defining a design of an integrated circuit, the method comprising:

storing said data in a plurality of data files in a database each of said data files having an associated file type and being arranged in a plurality of data stores in said database ~~data base~~, each of said data stores relating to a different aspect of said

design, wherein at least one of said data files is a data dependent file containing data dependent on data in one or more other of said data files;

selecting a file locator which is associated with a respective one of said data stores in said database ~~data-base~~ relating to a respective one of said aspects of the design;

using said selected file locator to identify a first data dependent file from said data files and to identify one or more other of said data files upon which said first data dependent file depends ~~is dependent~~;

for each of said identified files, selecting a first file reader associated with ~~the~~ file type of the identified files;

using said selected first file reader, determining a ~~predetermined parameter~~ timestamp indicating the time of last modification of said identified files;

comparing the ~~predetermined parameter~~ timestamp from the first data dependent file with that from each other identified file; and

After when determining ~~it is determined~~, based on the act of comparing, that the timestamp from the first data dependent file is ~~the~~ same as or later than the timestamp from each other identified file, providing an output signal for each identified data file~~, in response to the comparing,~~ indicating ~~whether~~ that the identified data file is valid for use in manufacture of said integrated circuit.

2. (Previously Presented) The ~~A~~ method according to claim 1, wherein identifying files comprises:

locating, via said file locator, files which contain dependency information;

for each located file, selecting a second file reader associated with the file type of the located file; and

via said second file reader identifying said first dependent file and each other file on which the first file depends.

3. (Previously Presented) The ~~A~~ method according to claim 1 further comprising:

for each data store generating a list therein containing an entry for each first dependent file in the data store, said entry including a first record having details of the first dependent file.

4. (Original) The ~~A~~ method according to claim 3, wherein each entry in said list further includes a further record for each other identified file upon which the dependent file depends.

5. (Previously Presented) The ~~A~~ method according to claim 1 further comprising:

selecting the file locator from a file locator means which contains a plurality of file locators; and

selecting a file reader from file reader means which contain a plurality of file readers.

6. (Currently Amended) The ~~A~~ method according to claim 1, wherein said timestamp ~~predetermined parameter~~ comprises the date on which the data file was last modified.

7. (Currently Amended) The ~~A~~ method according to claim 1, wherein said ~~predetermined parameter~~ timestamp is a UNIX date stamp.

8. (Currently Amended) The ~~A~~ method according to claim 1 further comprising:

identifying every said first dependent file in said data store.

9. (Previously Presented) The ~~A~~ method according to claim 1, wherein said data store is a database ~~data base~~ library.

10. (Currently Amended) A computer system arranged to validate data defining a design of an integrated circuit, the computer system comprising:

a memory; and

a processor, coupled to the memory, configured to:

~~storing means for storing~~ store said data in a plurality of data files in a data base in the memory, each of said data files having an associated file type and being arranged in a plurality of data stores in said database ~~data base~~, each of said data stores relating to a different aspect of said design, wherein at least one of said data files is a data dependent file containing data dependent on data in one or more other of said data files;

~~a plurality of file locators each associated with a respective one of said data stores in said data base relating to a respective one of said aspects of the design, and arranged to~~ identify a first data dependent file from said data files in said associated data store and one or more other of said data files in said data base upon which said first data dependent file depends ~~is dependent~~;

~~a plurality of file readers each associated with a respective file type and each arranged to~~ determine a ~~predetermined parameter~~ timestamp indicating the time of last modification for ~~at least one identified file having that associated~~ each identified file ~~type~~;

~~comparison means arranged to~~ compare the ~~predetermined parameter~~ timestamp determined for said first data dependent file, with the ~~predetermined parameter~~ timestamp determined for each other identified file; and

After when determining ~~it is determined~~, based on the comparison, that the timestamp from the first data dependent file is ~~the~~ same as or later than the timestamp from each other identified file, ~~output means responsive to said comparison means and having an~~ output a signal for each identified file which indicates ~~whether said first file~~ that it is valid for use in manufacture of said integrated circuit.

11. (Currently Amended) The ~~A~~ computer system according to claim 10, ~~said system further comprising:~~ wherein [[in]] each data store~~,~~ stores at least one file which can be located and which contains dependency information which enables dependent files and said other files in the data store to be identified; and wherein the processor is configured ~~means provided~~ to locate said located file.

12. (Currently Amended) The ~~A~~ computer system according to claim 11, ~~further comprising:~~

wherein the processor is configured ~~a file reader associated with the located file which is adapted~~ to provide a list in the data store, said list having an entry for each dependent file having details contained in the located file and including a record in said entry for said dependent file together with a further record for each other file upon which the dependent file depends.

13. (Canceled)

14. (Currently Amended) The ~~A~~ computer system according to claim 10, wherein said ~~predetermined parameter~~ timestamp comprises the date on which the date file was last modified.

15. (Currently Amended) The ~~A~~ computer system according to claim 10, wherein said ~~predetermined parameter~~ timestamp is a UNIX date stamp.

16. (Previously Presented) The ~~A~~ computer system according to claim 10, wherein said data store is a database ~~data base~~ library.

17. (Canceled)

18. (Currently Amended) A computer readable medium, having a program recorded thereon, where the program is to make the computer perform a method to validate data defining a design of an integrated circuit, the method comprising:

storing said data in a plurality of data files in a database each of said data files having an associated file type and being arranged in a plurality of data stores in said database ~~data base~~, each of said data stores relating to a different aspect of said design, wherein at least one of said data files is a data dependent file containing data dependent on data in one or more other of said data files;

selecting a file locator which is associated with a respective one of said data stores in said database ~~data base~~ relating to a respective one of said aspects of the design;

using said selected file locator to identify a first data dependent file from said data files and to identify one or more other of said data files upon which said first data dependent file depends ~~is dependent~~;

for each of said identified files, selecting a first file reader associated with ~~the~~ file type of the identified files;

using said selected first file reader, for each identified file, determining a ~~predetermined parameter~~ timestamp indicating a time of last modification of ~~said~~ the identified files;

comparing the ~~predetermined parameter~~ timestamp from the first data dependent file with that from each other identified file; and

After when determining ~~it is determined~~, based on the act of comparing, that the timestamp from the first data dependent file is ~~the~~ same as or later than the timestamp from each other identified file, providing an output signal for each identified data file~~, in response to the comparing,~~ indicating ~~whether~~ that the identified data file is valid for use in manufacture of said integrated circuit.

19-26 (Canceled)

27. (Previously Presented) The computer readable medium of claim 18, wherein said step of identifying files comprises:

locating, via said file locator, files which contain dependency information;

for each located file, selecting a second file reader associated with the file type of the located file; and

via said second file reader identifying said first dependent file and each other file on which the first file depends.

28. (Previously Presented) The computer readable medium of claim 18, wherein the method further comprises:

for each data store generating a list therein containing an entry for each first dependent file in the data store, said entry including a first record having details of the first dependent file.

29. (Previously Presented) The computer readable medium of claim 28, wherein each entry in said list further includes a further record for each other identified file upon which the dependent file depends.

30. (Previously Presented) The computer readable medium of claim 18, wherein the method further comprises:

selecting the file locator from a file locator means which contains a plurality of file locators; and

selecting a file reader from file reader means which contain a plurality of file readers.

31. (Currently Amended) The computer readable medium of claim 18, wherein said ~~predetermined parameter~~ timestamp comprises the date on which the data file was last modified.

32. (Currently Amended) The computer readable medium of claim 18, wherein said ~~predetermined parameter~~ timestamp is a UNIX date stamp.

33. (Previously Presented) The computer readable medium of claim 18, wherein the method further comprises:

identifying every said first dependent file in said data store.

34. (Previously Presented) The computer readable medium of claim 18, wherein said data store is a data base library.

35. (Previously Presented) The method of claim 1, wherein each of the plurality of data stores is of a different type and wherein the step of selecting a file locator further comprises:

selecting a different file locator for each store of a different type.

36. (Previously Presented) The computer system of claim 10, wherein each of the plurality of data stores is of a different type.

37. (Canceled)

38. (Previously Presented) The computer readable medium of claim 18, wherein each of the plurality of data stores is of a different type and wherein the step of selecting a file locator further comprises: selecting a different file locator for each store of a different type.

Allowable Subject Matter

3. Claims 1-12, 14-16, 18, 27-36 and 38 are allowed over prior art of made of records.

The following is an examiner's statement of reasons for allowance:

As to claim 1, the examiner with the applicant argument on pages 13-16 for least theses reasons "Reber does not disclose or suggest a method of operating a computer system, "to validate the data defining a design of an integrated circuit," and "providing an output signal for each data file indicating whether the data file is valid for use in manufacture of said integrated circuit, using said selected file locator to identify a first data dependent file from said data files and to identify one or more other of said data files upon which said first file is dependent, using said selected first file reader, determining a predetermined parameter of said identified file..." as disclosed in claim 1.

Claim 2-9 and 35 are depended on claim 1; therefore, claims 2-9 and 35 are allowed under the same reason as to claim 1.

Claim 10 is a computer system arranged to validate data defining a design of an integrated circuit, which perform the similar steps in claim 1; therefore, claim 10 is allowed under the same reason as to claim 1.

Claims 11-12, 14-16 and 36 are depended on claim 10; therefore, claims 11-12, 14-16 and 36 are allowed under the same reason as to claim 10.

Claim 18 is a computer readable medium, having a program encoded thereon, when the program is to make the computer perform a method to validate defining a data design of an integrated circuit, the method perform the similar steps as to claim 1; therefore, claim 18 is allowed under the same reason as to claim 1.

Claims 27-34 and 38 are depended on claim 17; therefore, claims 27-34 and 38 are allowed under the same reason as to claim 18.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

NPL:

Wall et al. Generating verifiable microprocessors state machine code with HDL Design Tools, Industrial Electronics society, Vol. 3, page 2441-2446, Nov 2-6 2003.

Pflanz et al. On-line detection and correction in storage elements with cross-parity check, On-line Testing Workshop, pages 1-5, July 8-10 2002.

Vanbekbergen et al. A design and validation system for asynchronous circuits, Annual ACM IEEE Automation Conference, page 725-730, 1995.

Ahdoot et al. IBM FSD VLSI chip design methodology, Annual ACM IEEE Design Automation Conference, pages 39-45, 1983.

Pandey et al. Formal verification of PowerPC arrays using symbolic trajectory evaluation, Annual ACM IEEE Design Conference, page 649-654, 1996.

Donald J. McGinnis Autocheck program, program to check validity of printed circuit cards and circuit, ACM/CSC-ER, Proceeding of the ACM annual conference, Vol. 1, page 398-420, year2 1972.

Kern et al. Formal verification in hardware design: a survey, ACM Transactions on Design Automation of Electronic System (TODAES), Vol. 4, Issue 2, pages 123-193, 1999.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is at 571-272-4041, or unofficial fax number for the purpose of discussion (571) 273-4041 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached at 571-272-4107.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231.

The fax numbers for the organization where this application or proceeding is assigned are as follow:

(571) 273-8300 [Official Communication]

BQ To
June 22nd, 2007

Cam Y Truong
primary Examiner